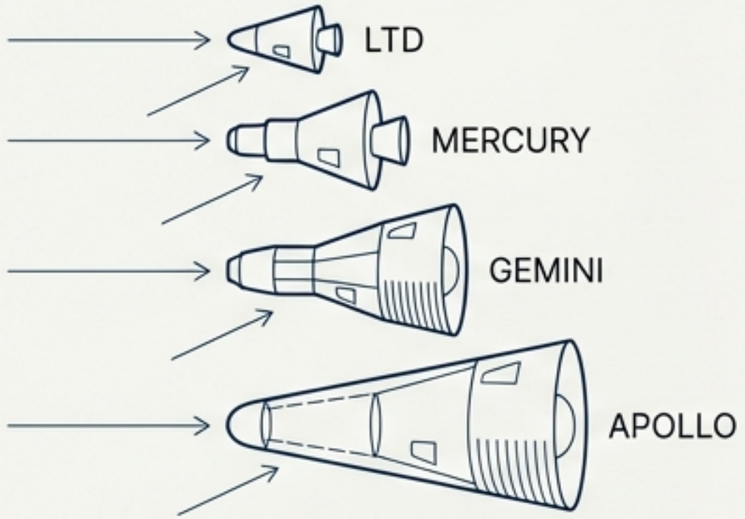
A Revolutionary Leap in Hypersonic Flight

In the mid-1990s, a radical new concept emerged that promised to rewrite the rules of aerospace engineering: the “Directed Energy Air Spike.” Instead of a physical nose cone, a focused beam of energy could project ahead of a vehicle, creating a corridor of low-density air and allowing for unprecedented speed and efficiency.

It was a breakthrough that seemingly came from nowhere. Or did it?

The Visionary: Professor Leik Myrabo and the ‘Lightcraft’

Family of Laser-Boosted Lightcraft



Professor Leik Myrabo of Rensselaer Polytechnic Institute (RPI) was a pioneer in beamed-energy propulsion. His work in the 1980s, sponsored by NASA/USRA, focused on the “Lightcraft” project—a revolutionary plan to launch vehicles into orbit using ground-based lasers.

> “The overall goal for this NASA/USRA-sponsored ‘Apollo Lightcraft Project’ is to develop a revolutionary vehicle technology which can reduce payload transport costs by a factor of 1000 below the Space Shuttle Orbiter.”
> — *1988 NASA/USRA Report*

The 1988 “Apollo Lightcraft” Concept Was Inspired by the Past

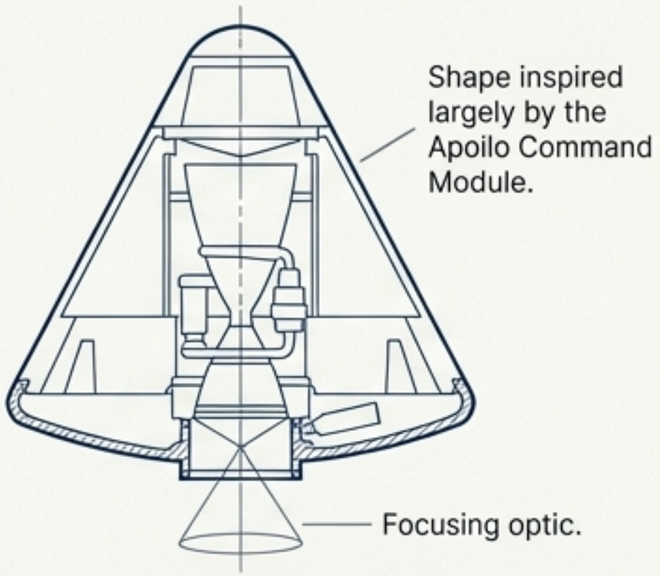


FIGURE 2.1: GENERAL LAYOUT OF ENGINE/OPTICS/VEHICLE CONFIGURATION

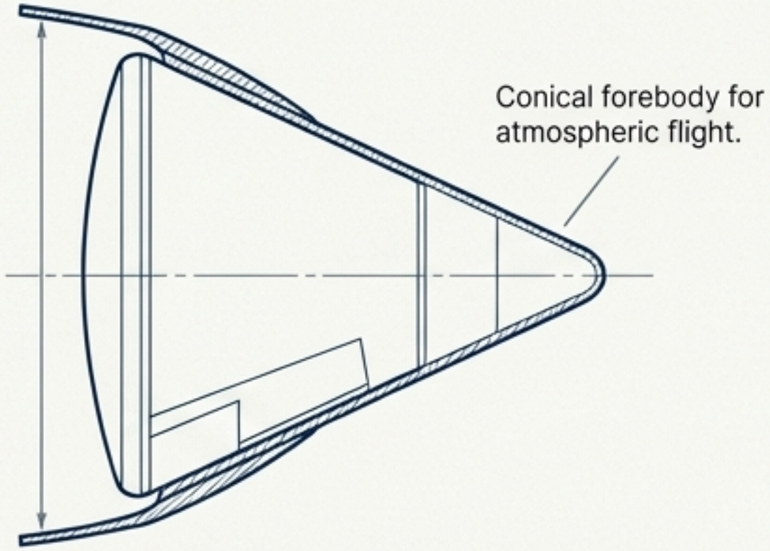


FIGURE 2.2: FOREBODY, AFTERBODY AND SHROUD CONTOURS

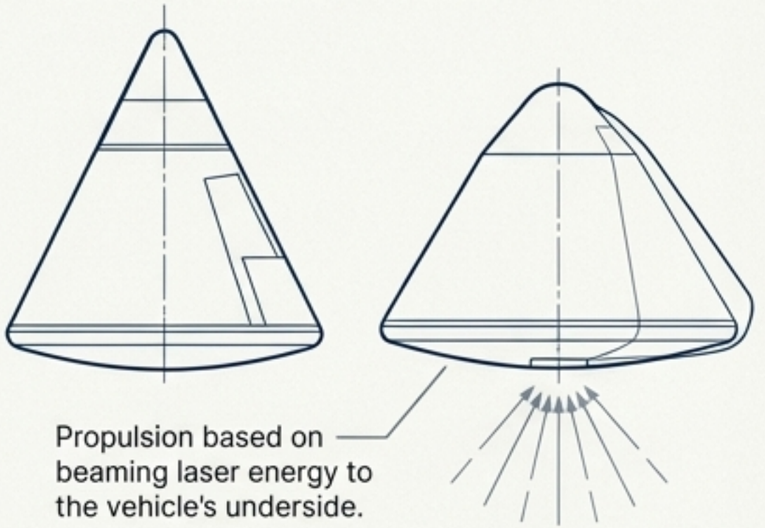
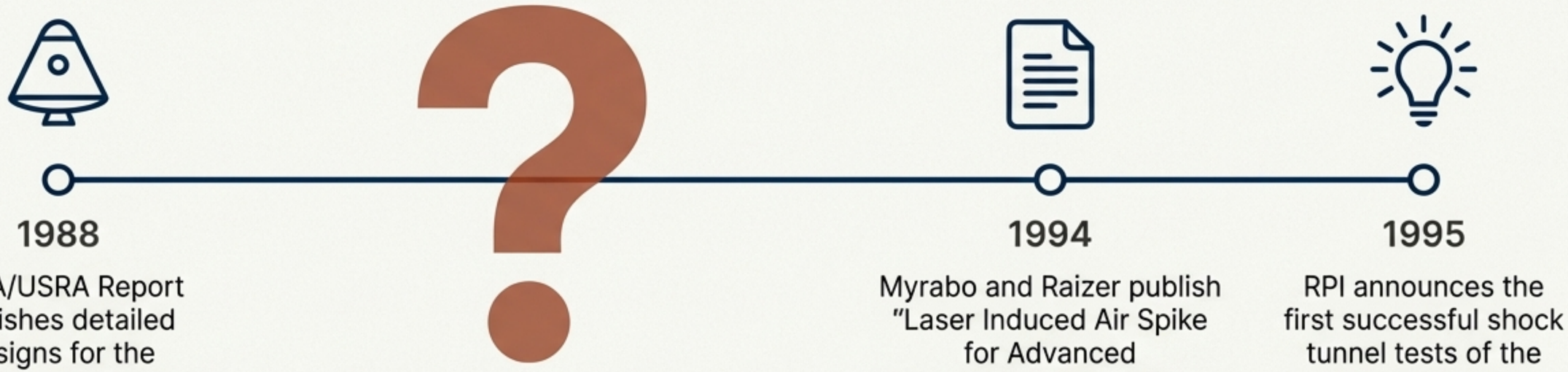


FIGURE 1.15: RE-ENTRY CONFIGURATIONS

As of June 1988, Myrabo’s designs were rooted in **proven aerospace principles.** The vehicles were **conical, an evolution of the Apollo-era capsules, designed to receive propulsive energy at their base.**

A Sudden, Unexplained Shift in Design



1988

NASA/USRA Report publishes detailed designs for the conical, Apollo-inspired Lightcraft.

1994

Myrabo and Raizer publish “Laser Induced Air Spike for Advanced Transatmospheric Vehicle,” describing a “novel device”.

1995

RPI announces the first successful shock tunnel tests of the “revolutionary” Air Spike concept.

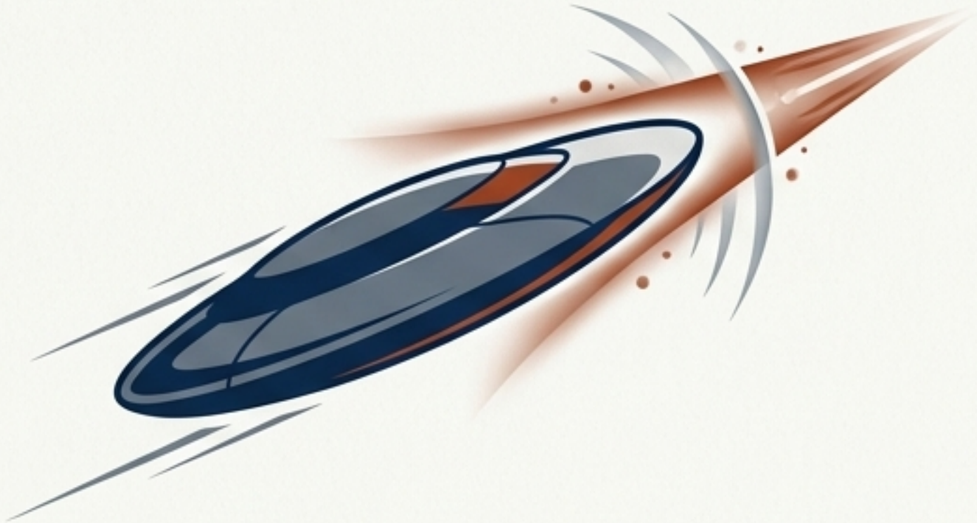
In just a few years, Myrabo’s entire design philosophy changed.
What happened in between?

From Evolution to Revolution

BEFORE: 1988

Conical shape, inspired by Apollo capsules. Propulsion from the rear.

AFTER: 1994



Disc shape, flying on-edge. Propulsion enabled by a forward-projecting energy beam.

This was not an incremental improvement. It was a complete reimagining of hypersonic flight. What was the catalyst for such a profound change?

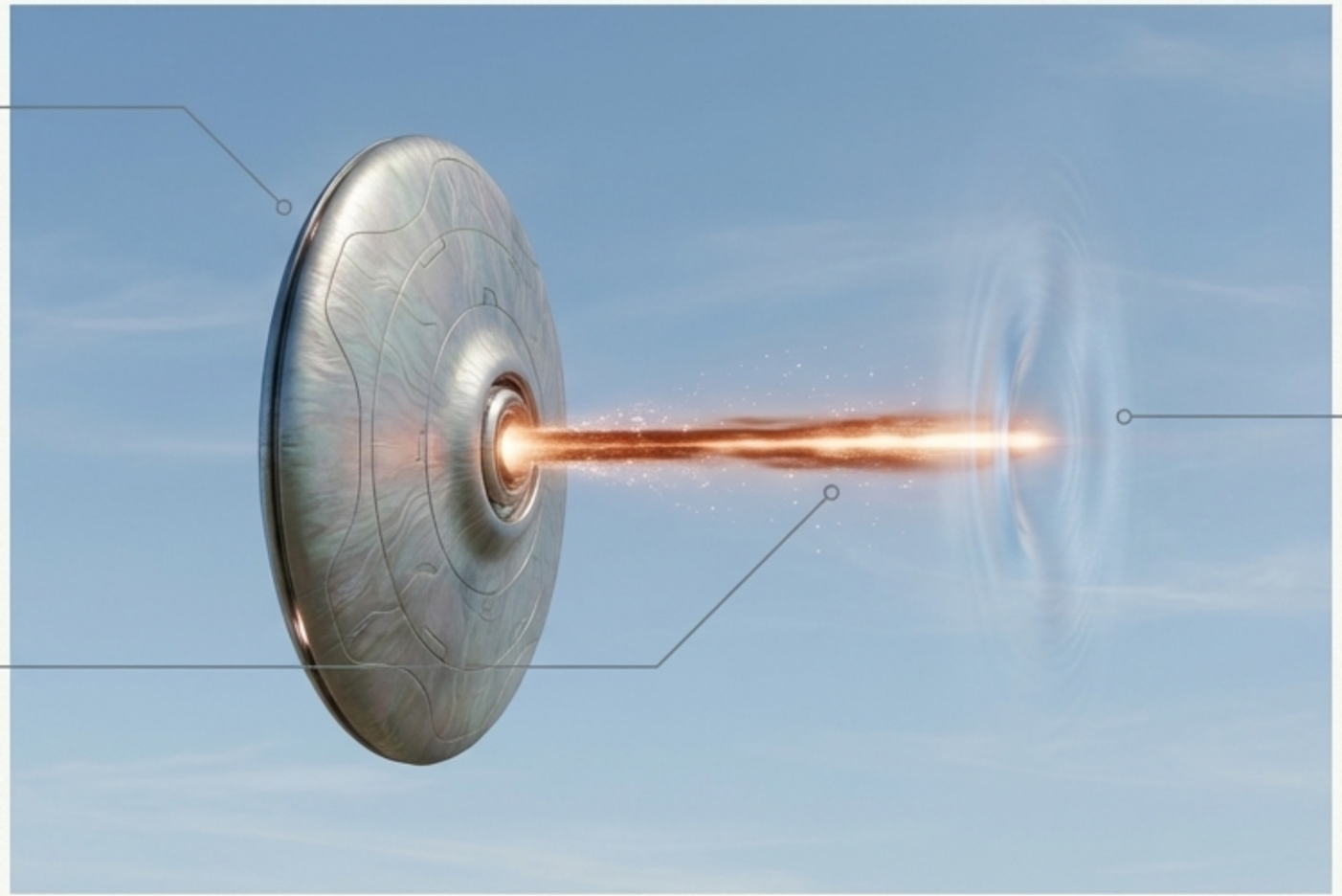
The Catalyst: An Anomaly on Film

The answer may lie in an **event that occurred on October 5, 1985**. On that day, researcher Ray Stanford filmed a series of **highly unusual vehicles** over Corpus Christi, Texas. The film captured something that defied conventional explanation and, until then, had never been conceived of in aerospace design.

A Technology Beyond Known Science

On-Edge Flight

A disc-shaped vehicle traveling on its edge, a seemingly impossible aerodynamic orientation.



Forward-Pulsing Beam

A bright beam of energy projects forward from the center, its length varying in different frames of the film.

Atmospheric Effect

A subtle pattern appears in the air ahead of the vehicle, suggesting the beam is creating a 'vacuum corridor' for the craft to travel through.

Connecting the Scientist to the Film

Dr. Leik Myrabo
(RPI)

The Stanford Film
(1985)

The connection was made by one of Myrabo's own graduate students at RPI, who had previously known Ray Stanford. The student understood the profound implications of what the film showed.

The student told Myrabo that if he saw what Ray had on film, he would be "years ahead" of where he was then.

The Moment of Inspiration: March 1987

In March 1987, while attending a symposium near Washington D.C., Dr. Myrabo made a side trip to visit Ray Stanford. It was not a brief viewing.

"Oh that must be Leik Myrabo from RPI. He was here at my house a few years ago and spent **three days looking at my films!**" - Direct account from Ray Stanford

The Timeline, Solved.

Oct 1985
Ray Stanford films on-edge, beam-projecting disc.

Mar 1987
Dr. Myrabo spends three days studying the Stanford film.

Jun 1988
Myrabo's report still details the *conical*, Apollo-inspired Lightcraft design.

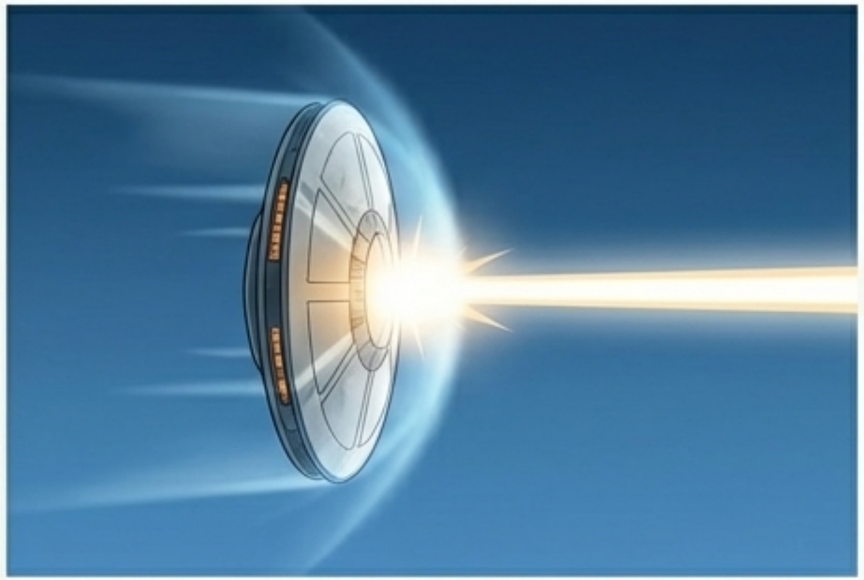
1994
Myrabo publishes his "novel" Air Spike concept.

1995
The Air Spike is successfully tested.

The inspiration for the 1994 breakthrough is now clear. The concept for the Directed Energy Air Spike was not conceived in 1993; it was observed in 1985 and studied in detail in 1987.

Translating Observation into Innovation

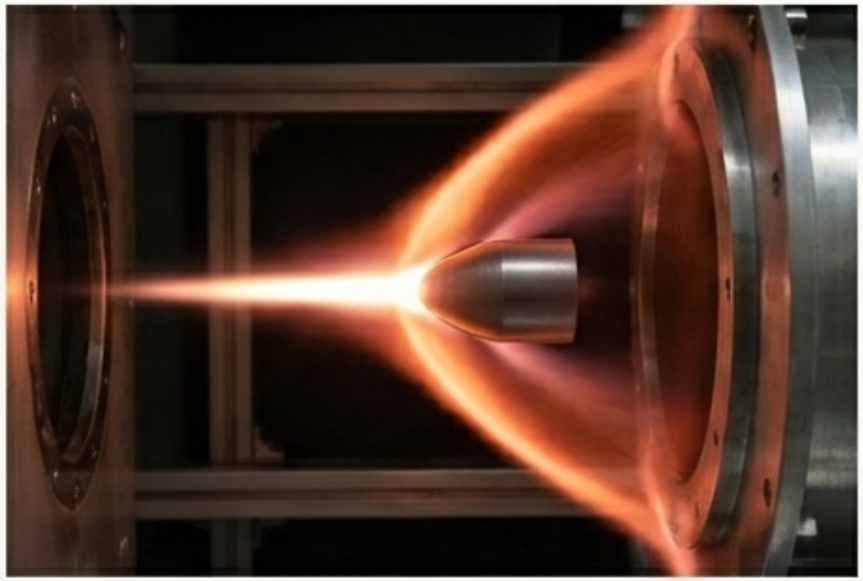
Observation: The Stanford Film



Vector illustration for on–edge disil of the "key recreation" from Slide 7

> “The principal function of an Air Spike is to replace the traditional sharp conical forebody normally proposed for streamlining an aerospaceplane.”
>
> *- AIAA Paper 1994-2451*

Innovation: The Air Spike



Photorealistic and scientifically accurate recrea RPI shock tunnel test (based on “DEASM10Proof.jpg”)

The "novel device" described in 1994 directly mirrors the function observed in the 1985 film: using a forward-projecting energy beam to manipulate airflow and dramatically reduce drag on a blunt/disc-shaped body.

A Concept That Changed an Industry

The Air Spike concept was not a dead end. It sparked a wave of research across the globe. NASA's Marshall Space Flight Center created concept art, international researchers expanded on the work, and DARPA funded further development. The idea born from Stanford's film had entered the scientific mainstream.

International research by Myrabo's former student, Marco Minucci.

A Curious Case of Faded Memory

In a 2004 email exchange, years after the Air Spike breakthrough, Dr. Myrabo was asked about his memory of the Stanford film he had studied for three days.

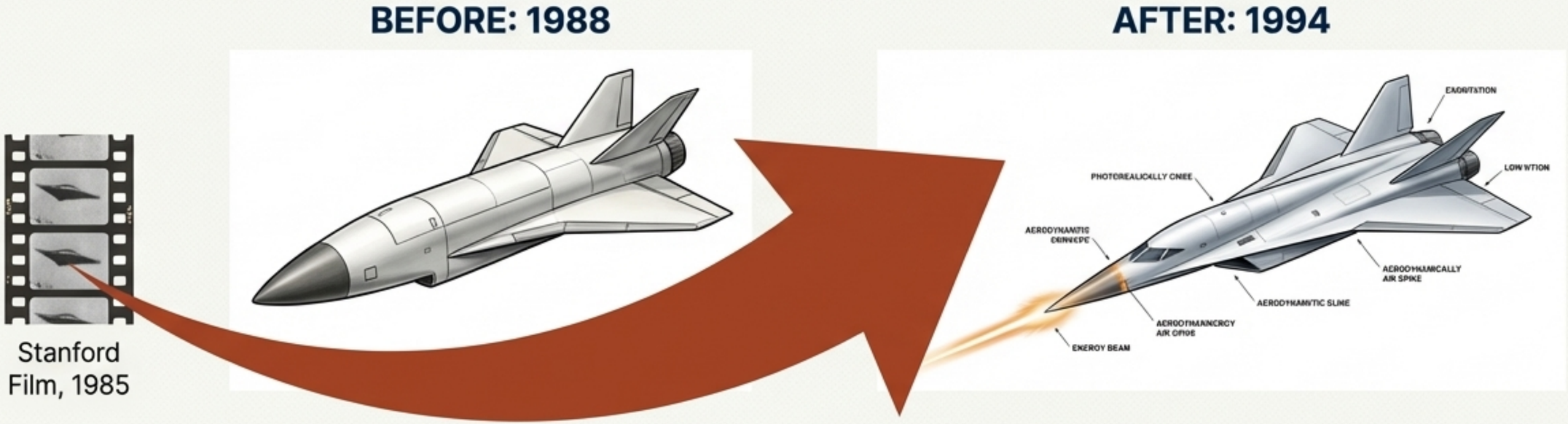
FROM: Leik Myrabo
DATE: June 2004

He implied his memory was not clear and that he had only seen the images briefly. He then stated:

“But the ‘on-edge discs using beams of energy ahead of them to affect the airflow’ **does seem to ring a bell, so to speak**.”

This statement contrasts sharply with the documented multi-day study in 1987 and the radical, near-identical design shift that followed, suggesting a deliberate effort to distance the breakthrough from its true source of inspiration.

The Unacknowledged Revolution



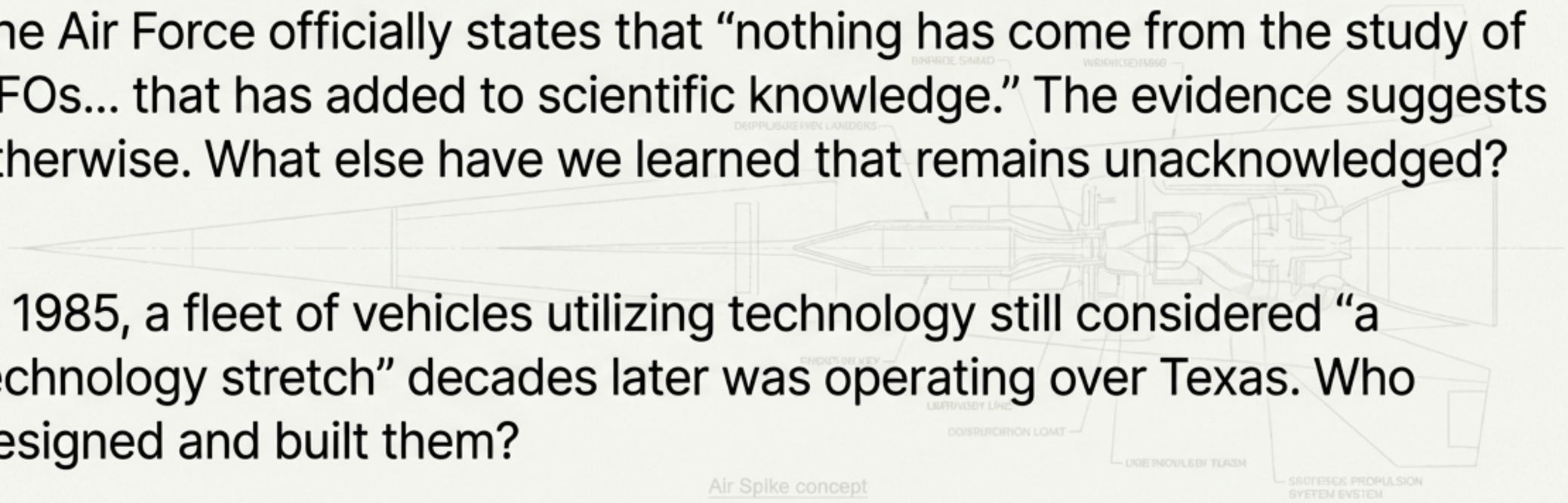
The evidence shows that the Directed Energy Air Spike—a revolutionary leap in hypersonic technology—was not the product of conventional, linear research and development.

Instead, the concept was directly inspired by a detailed, multi-day analysis of a vehicle of unknown origin captured on film in 1985.

This direct connection between a 'UFO' film and a major scientific breakthrough has been systematically obscured.

The Questions That Remain

The Air Force officially states that “nothing has come from the study of UFOs… that has added to scientific knowledge.” The evidence suggests otherwise. What else have we learned that remains unacknowledged?



In 1985, a fleet of vehicles utilizing technology still considered “a technology stretch” decades later was operating over Texas. Who designed and built them?

Breakthroughs in science often come from unexpected observations. Who benefits when the most profound observations are kept in the dark?